MATERIAL SAFETY DATA SHEET

1. SUBSTANCE AND SOURCE IDENTIFICATION

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2320
Gaithersburg, Maryland 20899-2320

SRM Number: 2296
MSDS Number: 2296
SRM Name: Reformulated Gasoline (Nominal 13 % Ethyl *tert*-Butyl Ether (ETBE), 40 mg/kg Sulfur)

Date of Issue: 24 January 2006

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Description: Standard Reference Material (SRM) 2296 is intended primarily for use in the calibration of instruments and the evaluation of methods used for the determination of total sulfur, benzene, toluene, and ethyl *tert*-butyl ether (ETBE) in reformulated gasoline or similar matrix. A unit of SRM 2296 consists of a set of two 20 mL ampoules containing a synthetic gasoline blend of twenty-five organic compounds.

Substance: **Reformulated Gasoline**

Other Designations: **Reformulated Gasoline** (reformulated fuel)

2. COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

Component: The composition of synthetic gasoline used for SRM 2296 consists of the following constituents:

Component	CAS Number	EC Number (EINECS)	Nominal Concentration (% by mass)
Ethyl *tert*-butyl ether (ETBE)	637-92-3	211-309-7	13
2,2,4-Trimethylpentane	540-84-1	208-759-1	12
Cyclohexane	110-82-7	203-806-2	9
Toluene	108-88-3	203-625-9	8
n-Octane	111-65-9	203-892-1	8
2,4-Dimethylpentane	108-08-7	203-548-0	8
n-Heptane	142-82-5	205-563-8	8
m-Xylene and *p*-Xylene	108-38-3 106-42-3	203-576-3 203-396-5	6
n-Decane	124-18-5	204-686-4	4
n-Hexane	110-54-3	203-777-6	4
n-Pentane	109-66-0	203-692-4	4
1,2,4-Trimethylbenzene	95-63-6	202-436-9	2
1,3,5-Trimethylbenzene	108-67-8	203-604-4	2
o-Xylene	95-47-6	202-422-2	2
Ethylbenzene	100-41-4	202-849-4	2
1-Heptene	592-76-7	209-767-8	1.6
2,3-Dimethyl-2-butene	563-79-1	209-263-8	1.6
1-Pentene	109-67-1	203-694-5	1
Naphthalene	91-20-3	202-049-5	1
Benzene	71-43-2	200-753-7	1
1,2,4,5-Tetramethylbenzene	95-93-2	202-465-7	1
Benzo[*b*]thiophene[(a)]	95-15-8	202-395-7	< 0.01
3-Methylthiophene[(a)]	616-44-4	210-482-6	< 0.01
Thiophene[(a)]	110-02-1	203-729-4	< 0.01

[(a)] The total concentration of each of these constituents in SRM 2296 is less than 1 % of the composition of the mixture which is below the reportable limit (0.1 % for chemicals identified as carcinogens) required by OSHA according to 29 CFR 1910.1200 (g)(2)(i)(C)(1) for MSDS information of a health hazard.

EC Classification (assigned): Xn, Carcinogen Category 2

Danger/Hazard Symbol: T, F

EC Risk (R): 11, 35, 45, 65

EC Safety (S): 16, 23, 24, 45, 53, 62

3. HAZARDS IDENTIFICATION

NFPA Ratings (Scale 0–4): Health = 2 Fire = 3 Reactivity = 0

Major Health Hazards: Harmful if swallowed or aspirated. Causes respiratory tract, skin, and eye irritation. Causes blood, liver, nerve damage, and central nervous system depression. Cancer hazard (in humans).

Physical Hazards: Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapor is heavier than air and can ignite at distant ignition sources and flash back.

Potential Health Effects

Inhalation: May cause throat and respiratory tract irritation. At 2 000 ppm, anesthetic effects may occur. Symptoms included central nervous system depression, headache, nausea, vomiting, dizziness, drowsiness, burred vision, difficulty swallowing, staggering, and confusion. Chronic exposure may lead to risk of cancer (benzene).

Skin Contact: Acute exposure to intact skin may cause irritation. Prolonged exposure may cause blistering. May be absorbed through the skin. Repeated and prolonged contact may cause irritation, dermatitis and defatting of the skin with drying, cracking, burns, or blistering.

Eye Contact: Liquid splashed in the eyes may cause pain and transient corneal epithelial disturbance. Concentrations between 270 ppm and 990 ppm may cause a sensation of irritation with a possibility of conjuctival hyperemia following. Prolonged or repeated exposure may cause conjunctivitis and possible gradual loss of corneal and conjunctival sensitivity.

Ingestion: Ingestion may cause irritation and burning of the gastrointestinal tract with nausea, vomiting and diarrhea. Absorption may cause initial central nervous stimulation. Symptoms include mild excitation, restlessness, nervousness, irritability, twitching, weakness, blurred vision, headache, dizziness, confusion, unconsciousness, and coma. Cardiac arrhythmias may occur and liver damage is possible. Aspiration into the lungs may be fatal.

Listed as a Carcinogen/ Potential Carcinogen:

Yes	No	
X	___	In the National Toxicology Program (NTP) Report on Carcinogens.
X	___	In the International Agency for Research on Cancer (IARC) Monographs.
X	___	By the Occupational Safety and Health Administration (OSHA).

4. FIRST AID MEASURES

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing by qualified personnel. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Skin Contact: Wash skin with soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Evaporation of liquid may cause fire hazard. Get medical attention if necessary.

Eye Contact: Flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Get immediate medical attention.

Ingestion: Contact local poison control center or physician immediately. When vomiting occurs, keep head lower than hips to prevent aspiration. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Severe fire hazard. Vapor/air mixtures are explosive. Vapor is heavier than air and may ignite at distant ignition sources and flash back.

Extinguishing Media: Use regular dry chemical, carbon dioxide, or regular foam.

Fire Fighting: Move container from fire area if possible without exposure to risk. Avoid inhalation of material or combustion by-products. Wear full protective clothing and NIOSH-approved self-contained breathing apparatus (SCBA).

Flash Point: – 40 °C (Estimated)

Method Used: Not applicable.

Autoignition Temperature: Not applicable.

Flammability Limits in Air
Upper (Volume %): 7.6
Lower (Volume %): 1.2 to 1.4

6. ACCIDENTAL RELEASE MEASURES

Occupational Release: Keep unnecessary people away and isolate hazard area. Shut off sources of ignition and avoid heat and sparks. Try to stop leak if possible without personal risk. Absorb with sand or other non-combustible material. Collect the material in an appropriate container for disposal. For large spills, prevent spread into the environment. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to the Release Quantity (RQ). For releases reportable under CERCLA Section 103, notify the National Response Center at 800-424-8802 (USA).

Disposal: See Section 13, “Disposal Considerations”.

7. HANDLING AND STORAGE

Storage: Store and handle in accordance with all current regulations and standards. Subject to storage regulations U.S. OSHA 29 CFR 1910.106. Avoid storage away from incompatible substances, heat, and sources of ignition.

Safe Handling Precautions: Keep away from incompatible substances, heat, and sources of ignition. See Section 8, “Exposure Controls and Personal Protection”.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits[a]							
Hazardous Component	**OSHA (PEL)**		**ACGIH (TLV)**	**NIOSH**		**UK WEL**	
	mg/m³	**ppm**	**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**
Ethyl *tert*-Butyl Ether (ETBE)			5 (TWA)				
Cyclohexane	1050 (TWA)	300 (TWA)	100 (TWA)	1050 (10 h) recommended TWA	300	350 (TWA)	100 (TWA)
Toluene		200 (TWA)	50 (TWA) (skin)	375 (10 h) recommended TWA	100	191 (TWA) (skin)	50 (TWA) (skin)
n-Octane	2350 (TWA)	500 (TWA)	300 (TWA)	350 (10 h) recommended TWA	75		
n-Heptane	2000 (TWA)	500 (TWA)	400 (TWA) 500 (STEL)	350 (10 h) recommended TWA	85		500 (TWA)
m-Xylene and *p*-Xylene	435 (TWA)	100 (TWA)	100 (TWA) 150 (STEL)	435 (10 h) recommended TWA	100	220 (TWA) (skin; mixed isomers)	50 (TWA) (skin; mixed isomers)
n-Decane	2000 (TWA)	500 (TWA)					
n-Hexane	1800 (TWA)	500 (TWA)	50 (TWA) (skin)	180 (10 h) recommended TWA	50	72 (TWA)	20 (TWA)
n-Pentane	2950 (TWA)	1000 (TWA)	600 (TWA)	350 (10 h) recommended TWA	120		
1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene			25 (TWA) (mixed isomer)	125 (10 h) recommended TWA	25	125 (TWA) (mixed isomers)	25 (TWA) (mixed isomers)
o-Xylene	435 (TWA)	100 (TWA)	100 (TWA)	435 (10 h) recommended TWA	100	220 (TWA) (skin; mixed isomers)	50 (TWA) (skin; mixed isomers)
Ethylbenzene	435 (TWA)	100 (TWA)	100 (TWA)	435 (10 h) recommended TWA	100	441 (TWA) (skin)	100 (TWA) (skin)
Naphthalene	50 (TWA)	10 (TWA)	10 (TWA) (skin)	50 (10 h) recommended TWA	10	Chemical Hazard Alert Notice issued; control exposure by all routes to levels as low as possible	
Benzene		1 (TWA); 0.5 (action level)	0.5 (TWA) (skin)	(10 h) recommended TWA	0.1		1 (TWA) (skin)

[a]Empty Cells: No information available.

No Occupational Exposure Limits Established: 2,2,4-Trimethylpentane; 2,4-Dimethylpentane; 2,3-Dimethyl-2-butene; 1-Pentene; 1,2,4,5-Tetramethylbenzene; 1-Heptene

Ventilation: Use a local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

Respirator: For conditions of frequent use or heavy exposure where exposure is apparent and engineering controls are not feasible, respirator protection may be needed. Refer to the "NIOSH Guide to the Selection and Use of Particulate Respirators Certified under 42 CFR 84" for selection and use of respirators certified by NIOSH.

Eye Protection: Wear safety goggles. An eye wash station should be readily available near areas of use.

Personal Protections: Wear appropriate chemical resistant clothing and gloves to prevent skin exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Component: **Reformulated Gasoline**

Appearance: Liquid. Colorless to amber.

Density: Not available.

Water Solubility: Negligible.

Volatility: 100 %

Odor Threshold: 0.25 ppm

Evaporation Rate: 10 to 11 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Stability: _X_ Stable ____ Unstable

Stable at normal temperature and pressure.

Conditions to Avoid: Avoid heat, flames, sparks, and other sources of ignition. Keep out of sewers and water supplies.

Incompatible Materials: Oxidizers.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition may produce carbon oxides and various hydrocarbons.

Hazardous Polymerization: ____ Will Occur _X_ Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Entry: _X_ Inhalation _X_ Skin _X_ Ingestion

Toxicity Data:

2,2,4-Trimethylpentane
Rat, Inhalation LC_{50}: 33.52 mg/L (4 h)
Human, Inhalation TC_{LO}: 1 000 mg/m^3 (5 min)
Human, Inhalation TC_{LO}: 500 mg/m^3 (40 min)

Ethyl tert-butyl ether (ETBE)
Rat, Oral LD: > 5 g/kg
Rat, Inhalation LC_{50}: > 5 880 mg/m^3 (4 h)

Cyclohexane
Rat, Oral LD_{50}: 12 705 mg/kg

Toluene
Man, Oral LD_{LO}: 719 µL/kg
Human, Oral LD_{LO}: 50 mg/kg
Man, Inhalation TC_{LO}: 100 ppm

***n*-Octane**
Rat, Inhalation LC_{50}: 118 g/m^3 (4 h)

***n*-Heptane**
Human, Inhalation LC_{LO}: 1 000 ppm (6 min)

***m*-Xylene**
Man, Inhalation TC_{LO}: 424 mg/m^3 (6 h to 6 d)
Man, Intermittent Inhalation TC_{LO}: 870 mg/m^3 (4 h)

***p*-Xylene**
Rat, Inhalation LC_{50}: 4 550 ppm (4 h)

***n*-Decane**
Rat, Inhalation LC_{50}: > 1 369 ppm (8 h)

***n*-Hexane**
Human, Inhalation TC_{LO}: 190 ppm (8 weeks)
Rat, Oral LD_{50}: 25 g/kg

***n*-Pentane**
Rat, Inhalation LC_{50}: 364 g/m^3 (4 h)

1,2,4-Trimethylbenzene
Rat, Oral LD_{50}: 5 g/kg

1,3,5-Trimethylbenzene
Human, Inhalation TC_{LO}: 10 ppm

***o*-Xylene**
Human, Inhalation LC_{LO}: 6 125 ppm (12 h)
Rat, Oral LD_{50}: 3 617 mg/kg

Ethylbenzene
Human, Inhalation TC_{LO}: 100 ppm (8 h)
Human, Inhalation TC_{LO}: 4 350 mg/m^3
Rat, Oral LD_{50}: 3 500 mg/kg

Naphthalene
Human, Inhalation TC_{LO}: 250 mg/m^3
Human, Unreported LD_{LO}: 29 mg/kg
Man, Unreported LD_{LO}: 74 mg/kg
Rat, Oral LD_{50}: 490 mg/kg

Benzene
Human, Inhalation TC_{LO}: 100 ppm
Human, Inhalation TC_{LO}: 50 mg/m^3 (2 h)
Man, Intermittent Inhalation TC_{LO}: 150 ppm (1 y)
Human, Oral LD_{LO}: 0.7 mL/kg
Man, Oral LD_{LO}: 50 mg/kg

1,2,4,5-Tetramethylbenzene
Rat, Oral LD_{50}: 6 989 mg/kg

Carcinogenic, Tumorigenic, Mutagenic Data:	**2,2,4-Trimethylpentane** has been investigated as a mutagenic effector.
	Cyclohexane has been investigated as a mutagenic effector.
	Toluene has been investigated as a mutagenic and reproductive effector.
`	***m*-Xylene, *o*-Xylene, *p*-Xylene** have been investigated as a reproductive effectors.
	***n*-Hexane** has been investigated as a mutagenic, reproductive, and tumorigenic effector.
	***n*-Decane** has been investigated as a tumorigenic effector.
	1,2,4-Trimethylbenzene and **1,3,5-Trimethylbenzene** have been investigated as a mutagenic effector.
	has been investigated as a reproductive effector.
	Ethylbenzene: Listed by IARC as "Human Inadequate Evidence, Animal Sufficient Evidence", Group 2B; Listed by ACGIH as A3, "Animal Carcinogen". Has been investigated as a reproductive, mutagenic, and tumorigenic effector.
	Naphthalene: Listed by NTP as an "Anticipated Human Carcingen"; Listed by IARC as "Human Inadequate Evidence, Animal Sufficient Evidence", Group 2B; Listed by ACGIH as A4, "Not Classifiable as Human Carcinogen". Has been investigated as a tumorigenic, mutagenic, and reproductive effector.
	Benzene: Listed by OSHA as a Carcinogen; Listed by NTP as a "Known Human Carcinogen"; Listed by IARC as a "Human Sufficient Evidence, Animal Sufficient Evidence", Group I; Listed by ACGIH as A1, "Confirmed Human Carcinogen". Has been investigated as a tumorigenic, mutagenic, and reproductive effector.
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory disorders. Allergies.
Health Effects (Acute and Chronic):	See Section 3, "Hazards Identification".

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Disposal:	Dispose in accordance with federal, state, and local regulations. Subject to disposal regulations U.S. EPA 40 CFR 262, Hazardous Waste Number D001.

14. TRANSPORTATION INFORMATION

U.S. DOT:	Gasoline; UN1203; Packing Group II; Hazard Class 3; Excepted Quantity (20 mL × 2).

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4):

Regulated: 2,2,4-Trimethylpentane: 1000 lbs RQ; Cyclohexane: 1000 lbs RQ; Toluene: 1000 lbs RQ; *m*-Xylene: 1000 lbs RQ; *p*-Xylene: 100 lbs RQ; *n*-Hexane: 5000 lbs RQ; *o*-Xylene: 1000 lbs RQ; Ethylbenzene: 1000 lbs RQ; Naphthalene: 100 lbs RQ; Benzene: 10 lbs RQ.

Not Regulated: *n*-Octane; Ethyl *tert*-butyl ether (ETBE); 2,4-Dimethylpentane; *n*-Heptane; *n*-Decane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; 1,2,4,5-Tetramethylbenzene.

SARA Title III Section 302 (40 CFR 355.30):

Not Regulated: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Naphthalene; Benzene; 1,2,4,5-Tetramethylbenzene.

SARA Title III Section 304 (40 CFR 355.40):

Not Regulated: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Naphthalene; Benzene; 1,2,4,5-Tetramethylbenzene.

SARA Title III, Section 313 (40 CFR 372.65):

Not Regulated: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *n*-Decane; *n*-Pentane; 1,3,5-Trimethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; 1,2,4,5-Tetramethylbenzene.

Regulated: Cyclohexane; Toluene; *m*-Xylene; *p*-Xylene; *n*-Hexane; 1,2,4-Trimethylbenzene; *o*-Xylene; Ethylbenzene; Naphthalene; Benzene are listed.

OSHA Process Safety (29 CFR 1910.119):

Not Regulated: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Naphthalene; Benzene; 1,2,4,5-Tetramethylbenzene.

California Proposition 65:

Not Regulated: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; 2,3-Dimethyl-2-butene; 1-Pentene; 1,2,4,5-Tetramethylbenzene.

Regulated:

Toluene is known to the state of California to cause developmental toxicity (1991)

Ethylbenzene is known to the state of California to cause cancer (2004).

Naphthalene is known to the state of California to cause cancer (2002).

Benzene is known to the state of California to cause cancer, developmental toxicity, and male reproductive toxicity.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE:	Yes.
CHRONIC:	No.
FIRE:	Yes.
REACTIVE:	No.
SUDDEN RELEASE:	No.

CANADIAN Regulations:

WHMIS Classification:

Not Determined: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Naphthalene; Benzene; 1,2,4,5-Tetramethylbenzene.

National Inventory Status:

U.S. Inventory (TSCA):

Listed on Inventory: 2,2,4-Trimethlypentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *n*-Heptane; *m*-Xylene; *p*-Xylene; *n*-Decane; *n*-Hexane; *n*-Pentane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Naphthalene; Benzene; 1,2,4,5-Tetramethylbenzene; Benzo[*b*]thiophene; 3-Methylthiophene.

TSCA 12b Export Notification:

Not Listed: 2,2,4-Trimethylpentane; Ethyl *tert*-butyl ether (ETBE); Cyclohexane; Toluene; *n*-Octane; 2,4-Dimethylpentane; *m*-Xylene; *n*-Decane; *n*-Hexane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; *o*-Xylene; Ethylbenzene; 2,3-Dimethyl-2-butene; 1-Pentene; Benzene; 1,2,4,5-Tetramethylbenzene; Benzo[*b*]thiophene; 3-Methylthiophene; Thiophene.

Listed:
Heptane: CAS No. 142-82-5, Section 4.
p-Xylene: CAS No. 106-42-3, Section 4.
n-Pentane: CAS No. 109-66-0, Section 4.
Naphthalene: CAS No. 91-20-3, Section 4.

EC Classification:

Reformulated Gasoline

Xn	Harmful
	Carcinogen Category 2

Danger/Hazard Symbol:

T	Toxic.
F	Highly Flammable.

EC Risk and Safety Phrases:

Reformulated Gasoline

R11	Highly Flammable.
R35	Causes severe burns.
R45	May cause cancer.
R65	Harmful: may cause lung damage if swallowed.
S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe gas/fumes/vapor/spray.
S24	Avoid contact with skin.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S62	If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

16. OTHER INFORMATION

Sources: MDL Information Systems, Inc., MSDS *2,2,4-Trimethylpentane* 16 June 2005.
MDL Information Systems, Inc. MSDS *Ethyl tert-butyl ether* 16 June 2005.
MDL Information Systems, Inc. MSDS *Cyclohexane* 16 June 2005.
MDL Information Systems, Inc. MSDS *Toluene* 16 June 2005.
MDL Information Systems, Inc. MSDS *Octane* 16 June 2005.
MDL Information Systems, Inc. MSDS *2,4-Dimethylpentane* 16 June 2005.
MDL Information Systems, Inc. MSDS *n-Heptane* 16 June 2005.
MDL Information Systems, Inc. MSDS *m-Xylene* 16 June 2005.
MDL Information Systems, Inc. MSDS *p-Xylene* 16 June 2005.
MDL Information Systems, Inc. MSDS *n-Decane* 16 June 2005.
MDL Information Systems, Inc. MSDS *n-Hexane* 16 June 2005.
MDL Information Systems, Inc. MSDS *n-Pentane* 16 June 2005.
MDL Information Systems, Inc. MSDS *1,2,4-Trimethylbenzene* 16 June 2005.
MDL Information Systems, Inc. MSDS *1,3,5-Trimethylbenzene* 16 June 2005.
MDL Information Systems, Inc. MSDS *o-Xylene* 16 June 2005.
MDL Information Systems, Inc. MSDS *Ethylbenzene* 16 June 2005.
MDL Information Systems, Inc. MSDS *2,3-Dimethy-2-Butene* 19 March 2003.
MDL Information Systems, Inc. MSDS *1-Pentene* 16 June 2005.
MDL Information Systems, Inc. MSDS *Naphthalene* 16 June 2005.
MDL Information Systems, Inc. MSDS *Benzene* 16 June 2005.
MDL Information Systems, Inc. MSDS *1,2,4,5-Tetramethylbenzene* 17 June 2004.
MDL Information Systems, Inc. MSDS *Benzo[b]thiophene* 19 March 2003.
MDL Information Systems, Inc. MSDS *3-Methylthiophene* 16 June 2005.
MDL Information Systems, Inc. MSDS *Thiophene* 16 June 2005.